

ABSTRACT

A method for determining switching sequences of two-dimensional unary arrays of conducting branches of thermometrically decoded D/A converters, in a way that will ensure that the relative INL error function be contained between pre-established symmetrical upper and lower bound functions, has been found. When these upper
5 and lower bound functions are constant, the obtained switching sequence compensates both the linear and the quadratic component of the error distribution and therefore is affected by a very small absolute INL error, which depends essentially on the random component of the error distribution.

This method may be easily implemented by a computer program and allows the
10 realization of thermometrically decoded D/A converters affected by a known limited INL error function.